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THE PLANT DISEASE REPORTER

Continuation of

THE PLANT DISEASE BULLETIN

Issued By

THE PLANT DISEASE SURVEY

Volume VII Number 5

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BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

THE PLANT DISEASE REPORTER

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Vol. VII August 15, 1923 Number 5

MORE REPORTS ON STEM RUST OF WHEAT

Telegraphic reports on stem rust from the barberry eradication state leaders were given in the August 1 number of this publication. The following are some of the regular reports of collaborators, for some of the same as well as for other states. These reports, and other information at hand, indicate that spring wheat in North and South Dakota and Nebraska is being injured to a considerably greater extent than was at first supposed. The following statement recently issued by the U. S. Department of Agriculture (Weather, Crops, and Markets 4: 134. Aug. 4, 1923) bears out this opinion.

> "In Nebraska and the Dakotas considerable rust damage is noted and some fields in Nebraska will not be cut. The late sown in North Dakota shows serious injury and cutting is being pushed to avoid more injury; but the early sown was mostly beyond damage before rust became widespread."

From reports at hand, it would appear that stem rust is worse than it has been for a number of years in the western states of Montana, Wyoming, and Colorado.

New York: Stem rust was first found on winter wheat on July 9. This finding was near a barberry bush but later observations indicate that stem rust appeared generally throughout the western New York wheat belt on about July 12-14. Usually only a trace of infection was found in most fields but exceptional cases showed as high as 15% infection. Apparently stem rust will cause little or no damage to the wheat. (Kirby, July 15)

Pennsylvania: Very slight infection, hard to find in most fields. (Thurston, July 15)

West Virginia: Less observed this season than for a number of years. Probably due largely to a generally dry fall and spring. (Sherwood, August 2)

Virginia: "Dr F. E. Kempton, pathologist in charge of barberry eradication, returned June 23 from a day's trip in Wythe County, Virginia, where he was called by James G. Godkin, extension pathologist of the Virginia Agricultural Experiment Station, Blacksburg, to inspect a serious outbreak of black stem rust. Dr. Kempton, accompanied by Mr. Godkin and Mr. Gelp, County

Agent of Wythe County, spent the day inspecting grain fields in the southeastern portion of Wythe County and adjoining townships in Pulaski and Carrol Counties. Every grain field was attacked by black stem rust, traceable directly to the native barberry, Berberis canadensis, prevalent in that section of Virginia. In each case the rust was very severe near the barberries and from 10 to 20 rods from them. The rust became lighter as the distance from the barberries increased, diminishing to 10 per cent or less at a distance of 50 rods. The wheat near the barberries was in most cases shriveled but that at 50 rods probably will not show much damage this year. The wheat was almost ripe and in some fields it was being harvested." (Cereal Courier 15: 127, June 30)

Mississippi: Reported by H. D. Barker from Experiment Station farm, A. & M. College in small fields as much as 10% infection. Also reported as general in fields in one locality in De Soto County. (Sect. Plant Pathology, July 1)

Ohio: Very little in eastern Ohio, infection, however, general in western and southern portion of the state. Losses not as severe this year as normal. (Thomas, July 15)

Michigan: In central and western Michigan considerable rust at very late period. Damage slight, shrivelling of grain being due to climatic conditions rather than rust.

In eastern part of state little rust aside from local effects near barberries.

At Chatham, abundant rust, early, with some probability of overwintering. (Coons, July 15)

Wisconsin: Late planted wheat is considerably damaged. Wheat is a very minor crop in Wisconsin. (Spring wheat) (Vaughan, Aug. 1)

Traces only on some late fields. Practically all winter wheat matured before any damage. (Vaughan, July 15)

North Dakota: Although the first date of appearance was much later than in previous years (June 29, Fargo) rust has spread with great rapidity. Infection over the state is general, and severe in many localities. Reports of rust have been received from practically every county in the state. The eastern half of the state will suffer marked losses. Yields of six and eight bushels are predicted, with many fields being plowed under because of severe damage. Many fields will not pay the cost of cutting. Harvest is general. Indications are that all late sown wheat will be damaged both in the eastern and western parts of the state. Early sown wheat will get by in the western part, and in some instances in the eastern part of the state. Rust resistant wheats are showing a little more infection than last year. (Weniger, August 1)

South Dakota: Wheat is very rusty. Ten to 100% on all common wheat except Kota which runs about 15%. Durum wheat rusted badly in many cases. (Evans, July 30)

Nebraska: Since my last report on the prevalence of Puccinia graminis on wheat in Nebraska, weather conditions have been such that the maturing of the grain in the western part of the State has been delayed and at the same time conditions were favorable for the rather rapid development of stem rust. A combination of weather conditions and stem rust have caused considerable damage in the western part of the State both in the winter wheat and the spring wheat areas. Many fields will not be harvested and what wheat is threshed will run very low both in quality and in yield. I am enclosing a rough map in which I have divided the State into three districts and showing the amount of rust in each district. (Peltier, August 9)

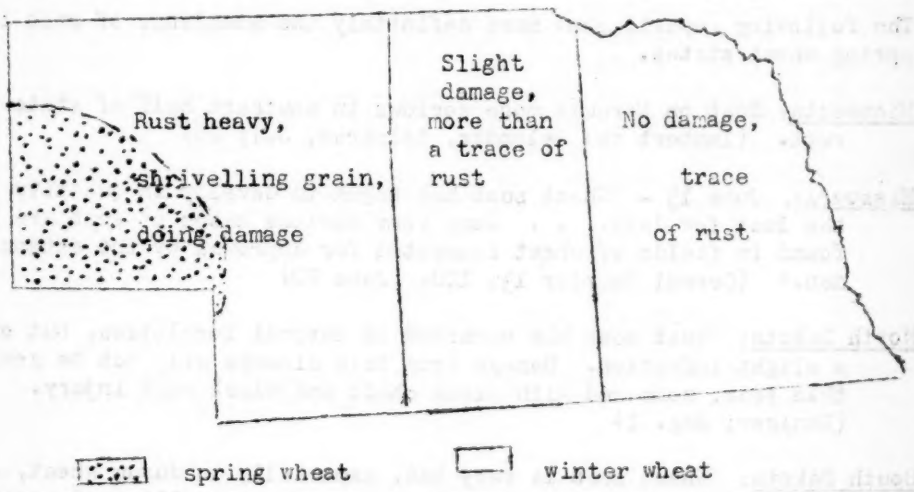

Fig. 2. Damage from stem rust in various sections of Nebraska, after map by G. L. Peltier

Kansas: Stem rust was wide spread in Kansas. In most places the infection was too late to cause damage. In Thomas, Cheyenne and Rawlins counties, it was estimated that 25% damage occurred. Fortunately the infection came late, otherwise Kansas may have had considerable injury. Biologic strains are evident. Kanred showed no infection in some counties, while in others it showed considerable. Sections of the state where the wheat was late suffered most. (Melchers, July 15)

Colorado: It has been reported from the northeast corner of the state to as far south as Cheyenne Wells along the eastern side of the state, but so far no damage has been reported. It is prevalent about Fort Collins in all fields visited thus far. In one field it is very peculiar as it is didtributed in spots about six feet in diameter and gradually decreases to the outside limits while

at the center there is from 75-90% infection. These spots are some distance apart and between spots no indication of rust. In all probability rust is appearing too late to do much damage if any, only to the late varieties, if any. (Learn, July 15)

This rust is prevalent over the state, and from the reports received it will cause a heavy loss in some sections. In many sections the wheat is just coming in blossom and with the heavy infection at present it cannot but do heavy damage. (Learn, Aug 1)

CONSIDERABLE SCAB IN SPRING WHEAT

The following reports show more definitely the abundance of scab in some of the spring wheat states.

Minnesota: Scab on Marquis more serious in southern half of state than rust. (Lambert and Melander, telegram, July 28)

Missouri: June 15 - "Wheat scab has begun to develop in quantity in the last few days. . . Some very serious cases of scab are being found in fields of wheat inspected for approval by the extension men." (Cereal Courier 15: 120. June 20)

North Dakota: Wheat scab has occurred in several localities, but only a slight infection. Damage from this disease will not be great this year, compared with black chaff and black rust injury. (Weniger, Aug. 1)

South Dakota: Wheat scab is very bad, especially in durum wheat, - 10 to 75% in many cases. Will cause much shrivelling of grain. (Evans, July 30)

Nebraska: A trace to light infection of scab has been found this season. However, not any fields have been observed in which scab was serious, although it is much more prevalent than usual. (Peltier, July)

Attention is called to an error in the quotation of Valleau's report on wheat scab, page 35 of the last number of the Plant Disease Reporter (Volume 7, Aug. 1, 1923). The last line of his note should read as follows: "Wheat is quite generally poorer following corn than following tobacco, grass, clover, etc."

DOWNY MILDEW OF WHEAT FOUND IN DELAWARE

On June 25, Collaborator J. F. Adams collected specimens of the downy mildew, Sclerospora macrospora, on Red Rock and Miracle wheat on the experimental plots at the Agricultural Experiment Station, Newark, Delaware. The specimens were sent to Washington and determined by A. G. Johnson. The disease only appeared in a low area where the wheat was very thin. Some plants were entirely affected, while others showed several normal culms with two or more diseased ones. No grain was found in the diseased heads. Other symptoms

were short, stocky growth, delayed maturity of plants, deep bluish green color of stalk and head, and irregular emergence of head. The seed of the Red Rock variety was secured from the Pennsylvania Experiment Station, and the Miracle variety came from Landisville, Pennsylvania. This note is especially significant since it is the first report of this disease from this part of the country. The only other collections that have been made in the United States were in Tennessee and Kentucky in 1921 and in California in 1919.

OUTBREAK OF BLACK CHAFF IN SPRING WHEAT IN NORTH DAKOTA

"North Dakota is experiencing its first epidemic of this disease, as far as records indicate. I found a moderate infection in the vicinity of Fargo in 1920. Since then it has been practically absent. This year infection is general over the State, severe in many individual fields. As high as 50% infected heads have been observed. In some fields there will be actual losses of perhaps twenty percent, in cases where infection came early, leaves were blighted, heads prevented from emerging, glumes blackened, and grains shriveled. Marquis and Kota seem to be very susceptible. Several of the amber durum wheats are heavily infected. Along with heavy rust infection, this disease will result in much shriveled grain this year." (Weniger, August 1)

REPORT OF BUNT OF WHEAT FROM WASHINGTON

"Stinking smut more serious on winter wheat than for last season. Many fields will average 20% to 50% smut by head count." (Dana, Aug. 1)

LEAF RUST OF RYE

Rhode Island: Comparatively small amount of leaf rust this season. The season is especially late this year, especially for fungi - contrast with last season is very noticeable. While there was abundant rust last year, I find very little this year, and that which does appear is 10 days to 2 weeks later than last year. (Browning, June 5)

Connecticut: Four reports. Apparently not more common than usual. (Clinton, July 15)

New York: Leaf rust overwintered at Ithaca as open uredinia and during May and early June increased from a trace to an average of 10% infection. This rust was present in about this amount in practically all rye fields visited. (Kirby, July 15)

Virginia: Rather general but of slight importance. (Fromme, July 1)

Illinois: This rust has been found generally distributed throughout the state, with the exception of Cook county. Examinations have been made of numerous fields in nine counties and in each case the percent of infected plants was 100% or nearly that. The in-

fection on individual plants has varied from a trace to as much as 90% with 20 and 30% quite common. (Tehon, July 15)

Minnesota: Winter rye in southern counties infected later than in more northern part of state. Not common in South until latter part of June. Damage slight in south, possibly more serious further north. More common spring rye. (Sect. Plant Path., July 15)

Nebraska: Not as common as the orange leaf rust on wheat. (Peltier, July)

California: Traces of leaf rust were found on rye. (Mackie, July 1)

FUSARIUM ROOT ROT OF OATS

The Section of Plant Pathology of the Minnesota Experiment Station reports that root rot of oats caused by Fusarium sp. is very common when oats are grown after corn. Occurrences have been noted in Cottonwood, Brown, Blue Earth, and other southern Minnesota counties.

A FEW OF THE REPORTS OF BARLEY DISEASES

Stripe caused by Helminthosporium gramineum:

Delaware: Spring barley treated with Semesan showed complete control of stripe while check contained .5% of diseased plants. (Adams, July 16)

Illinois: Stripe has been common in fields examined, but the percent of infection has not been high - usually less than 1%. Rarely 10% infection in a field has been found. (Tehon, August 1)

Wisconsin: About as last year. Traces in most fields; no appreciable damage. (Vaughan, August 1)

Nebraska: Common in Nebraska this year. Caused some reduction in yield. (Peltier, July)

Colorado: This disease is very prevalent over the state but in most cases there is but a trace. (Learn, August 1).

Stem rust caused by Puccinia graminis:

North Dakota: Stem rust is severe on barley at this date, and many fields will suffer marked losses. Along with hot weather, infections of 100% have brought late sown barley to rapid maturity, with all grain badly shrivelled. (Woniger, August 1)

Leaf rust caused by Puccinia simplex:

Nebraska: Observed for the first time since coming to Nebraska in 1920. Some plots on the Station Farm apparently heavily infected. (Peltier, July)

California: Leaf rust found in many areas on barley, especially in the southern coastal counties and in the Sacramento Valley. (Mackie, July 1)

Scab caused by Fusarium sp.:

Nebraska: General and much more common than wheat scab. Percent of infection rather high and some reduction in yield will result. (Peltier, July)

Pink root caused by Fusarium sp.:

California: Pink root was severe in Los Angeles, Orange and San Diego Counties and common over the State. (Mackie, July 1)

ALFALFA ROOT ROTS

Ozonium omnivorum:

Texas: Serious; 10% loss; prevalent in the Rio Grande Valley, under irrigation. (Taubenhaus)

Arizona: Occurs very rarely or not at all in Navajo and Apache Counties because of the high altitude and consequently colder climate.
Graham County: First noticed in April. Loss only 40 acres.
Yuma County: Loss 1,000 acres; disease first noticed this year about July 15.
Maricopa County: None reported up to June 1; due to appear later.
Yavapai County: First observed about June 15. Reaches height during third crop. Loss each season about 15%. (Brown, Aug. 1)

Fusarium sp.:

Washington: What appears to be a definite root-rot due to a species of Fusarium was first reported from Starbuck 5-10-23, and has since been found near Benton City. (Heald, June 7)

POWDERY MILDEW OF RED CLOVER

The red clover powdery mildew, although late in starting this year, and having indications of being only slightly conspicuous, is now appearing much more abundantly on the later crops in many sections, and more reports of abundance are being received.

Massachusetts: Reported throughout the state and more severe even than in 1922. Apparently it appeared somewhat earlier than last year. Found only on Trifolium pratense and apparently not transferable to T. incarnatum, T. medium or T. repens. (Osmun, July 15)

North Dakota: Infection is about as abundant as last year. Many fields in the southeastern part of the state have been observed with the infection general. How far west in the state this disease extends I have not been able to determine. Fields in the extreme northwestern part of the state did not show any infection when observed about July 10th. No perithecia have been found. (Woniger, Aug. 1)

South Dakota: Powdery mildew, 100% on red clover. (Evans, July 30)

MASSACHUSETTS AND PENNSYLVANIA REPORT ON APPLE SCAB

Massachusetts: Leaf infection heavy on McIntosh especially. Fruit infection not serious, as a rule. Both sulfur sprays and dusts have been effective in controlling the latter, but dust did not prevent primary leaf infection in most cases. (Osmun, July 15)

Pennsylvania: First report May 2 from Franklin County. Since then it has appeared very generally throughout the State. Damage will not be so great as in past two seasons except locally. The weather early was favorable for control, but late infections are appearing on the fruit in many localities. (Thurston, August 1).

APPLE BLACK ROT

A considerable number of reports of damage from the black rot fungus, Physalospora cydoniae, have been received.

Massachusetts: Rather common in a few orchards. Calyx-end infection is most frequent. (Osmun, July 15)

Connecticut: Not so many complaints as usual of injury to leaves. (Clinton, July 1)

New York: Reports from Dr. Guba and Mr. R. S. Kirby indicate that the black rot leaf spot is prevalent in unusually large amounts, especially in the Hudson Valley. It has been reported from twenty-eight counties in the State. (Chupp, July 1)

Delaware: Frog-eye leaf spot just observed 5-9-23 on Stayman, Transparent and Strawberry varieties. Very slight prevalence observed this year. Black rot is very prevalent on early varieties such as Fourth of July, Red Astrakan, Williams, and Transparent. Greater prevalence of codling moth and curculio may be associated with the increased prevalence. (Adams, July 15)

New Jersey: First reported on fruit of Williams Favorite July 3 from Monmouth County. Not severe. (Sect. Plant Path., July 1)

Pennsylvania: Noted as being quite general from Cumberland and Bedford Counties. Is causing considerable defoliation in Bedford County. (Thurston, August 1)

Virginia: Severe leaf infections in orchards that have not received the full spray program. Hot, dry weather is causing early dropping of infected leaves.

First observed April 26th, on cluster leaves at Burkeville. (Fromme, July 15)

First appearance of frog-eye on May 17. The disease is a minor consideration in the upper valley country. There is 60% less than last year and the infection is localized strictly around cankered limbs. (F. J. Schneiderhan, July 10)

South Carolina: Present but not serious as a leaf spot. (Ludwig, July 15)

Kansas: This organism has been observed doing considerable injury in nursery stock, especially on a block of two-year old Jonathans at Topeka. When this nursery was visited on June 6, 1923 the leaves had commenced to drop from this block. The nursery has not been inspected since. (White, July 1)

APPLE BLOTCH

Blotch reports have been received from New Jersey, Delaware, Virginia, West Virginia, Georgia, Illinois, and Kansas. These reports do not indicate any unusual abundance of this disease. A considerable number of collaborators have given the dates of first appearance, which, when put in the form of a table later on, will be valuable.

OTHER APPLE DISEASE REPORTS

Bitter rot caused by Glomerella cingulata:

Massachusetts: A few cases of severe infection on Red Astrachan. (Osmun, July 15)

Virginia: Found July 12th on Piedmont Pippin at Whitehall, Albemarle County. First record of season. Lack of rainfall has apparently held the disease in check as temperatures have been favorable. (Fromme, July 15)

Crown gall caused by Bacterium tumefaciens:

Arizona: Throughout the State; in some cases, brought in from nurseries; one clear case of infection following the planting of an orchard on the site of a diseased mesquite (Prosopis juliflora) forest, resulting in the loss of about 1 1/2 acres of apple and peach trees. Loss in the State difficult to determine until survey is complete. (Brown, July 1)

Spray injury:

Connecticut: Spray injury more common than usual in State this year, and two or three reports of injury to apples. In most cases it seemed to be due to lead arsenate which seems to have a larger percent soluble than normally. (Clinton, July 1)

PEACH BROWN ROT

New York: Brown rot cankers on peaches are fairly common, although not much blossom blight has been reported. A number of the commercial growers made a pre-blossom spray application with the hope of reducing the amount of blossom blight which last year was very destructive. (Chupp, July 1)

Pennsylvania: Early reports indicate general but rather slight infection this year. Much now depends upon the weather which has been dry and unfavorable so far. Brown rot is severe on unsprayed trees, locally mostly in small farm orchards. (Thurston, Aug. 1)

Ohio: This disease is about of average prevalence. The blighting of twigs and death of the buds from brown rot infection has been noted in quite a number of cases. (W. J. Young, July 1)

EASTERN BLUE STEM OF RASPBERRY IN ILLINOIS

C. O. Peak, with the Illinois State Department of Agriculture, has been inspecting raspberry plantations about the state, and under date of July 30 he sent in the following statement regarding eastern blue stem.

"At East Peoria, Illinois, I was in practically all the berry plantations and found infection ranging from 5 up to 80% of the plants in the field. At Bloomington I have found blue stem in eight fields with about eighteen more plantations to look over. The lowest percent of infection found has been 10% while the highest has been 65%. At Princeton I have been in only one field and found on black cap berries an infection ranging at 30%." (C. O. Peak, July 30)

THE WHITE SMUT OF GROUND CHERRY

"During 1922 there appeared in my garden at Forest Home near Ithaca the White Smut disease of the cultivated ground cherry, Physalis pruinosa. It appeared on volunteer plants which had come up from the previous season. This plant had first been introduced into my garden about 1920 from seed purchased from some seed firm. During 1920 and 1921 the fungus was not observed in the plants, which, so far as I remember, were perfectly healthy although there might have been some of the smut present but overlooked. In the spring of the present year (1923) I obtained new seed from a seedman and started the plants in the greenhouse. They were fairly good sized, perhaps 2 inches high when they were transplanted from the flats in the greenhouse to the garden some time in May. At that time the plants showed no trace of the smut. Volunteer plants from seed of 1922 began to grow up about the same time all about the garden. They too were free from the disease. Toward the latter part of June the smut made its appearance on the lower leaves of the plants in transplanted rows. In the meantime I had taken care to destroy all volunteer plants as fast as they appeared. In spite of this, however, a few in odds and ends of places reached a considerable size and up

to the present time none of them have shown the presence of the smut, chiefly, I think, because they have not reached a sufficient age. The transplanted plants are, now, (July 30), severely infected, the youngest lesions showing the white pustules on the upper surface and the brown dead spots in the older and lowermost leaves.

"The symptoms of the disease are most striking. The lesions are at first small, about 1/4 inch in diameter and puffed or raised as a result of the hyperplastic effect of the pathogene on the leaf tissue. Only the leaf blades show the disease and none of the pustules have been observed on the veins. These blisters are at first white on the upper surface as well as on the lower surface due to the coating of conidia. This conidial coating gradually disappears, the tissues of the leaf collapse in the area of the lesion and turn brown, forming a necrotic spot more or less angular in outline and limited by the little veinlets about it. The spots are a light brown in color and in the dead tissues are to be found the characteristic clamydospores of the smut.

"The disease is caused by Entyloma australe Speg. According to Clinton, (North American Flora, volume 7 part 1, page 64), it attacks many species of Physalis and certain species of Solanum. He does not record it however on this species of Physalis. The disease is very destructive to the ground cherry in my garden and while the plants are not destroyed, the foliage is gradually killed from the base of the plant up so that the berries are considerably reduced in size and fail to develop the normal and characteristic flavor." (Dept. Plant Path. Herb. No. 12439)

H. H. Whetzel".

BLACK LEG OF POTATO

New Jersey: Black leg (Bacillus phytophthorus). This trouble has not been severe. It was observed in only one place. In a seed source test, two rows planted with non-certified seed from Maine showed approximately 15 percent. (Martin, August 1)

Illinois: Found twice (field diagnosis only) in Monroe County and once in Logan. At time examined (June 18) and July 9 only 7 infected plants could be found although this disease is said to have been severe in previous years. (Tehon, August 1)

North Dakota: Black leg has been thus far of minor importance. At this time last year the disease was severe in many fields, and had killed many vines. Evidently many fields would have been infected this year, had weather conditions been favorable, for in all probability infected seed was used. Indications are that treating after cutting is responsible for better control of the disease. Growers are thus able to detect infected tubers, discard them, and further disinfect the surfaces of cut tubers which might be contaminated. Counties where treating has been practiced before cutting have not had as good control of black leg as in those where treating follows cutting of the seed pieces.

Wet weather, early in the season, brought about much rotting of seed pieces, and many fields were drowned out. (Woniger, August 1)

South Dakota: A few cases of black leg. (Evans, July 30)

Kansas: Black leg is not causing the damage it did last year. Fields are showing only a trace on the average this year while last year some fields ran as high as 7 percent of the plants destroyed. (White, July 15)

Arizona: Reported from Graham County where it was first observed this year in May. About ten acres affected. (Brown, August 1)

Washington: Individual fields show considerable of this trouble which has been observed in severe cases in eastern and western Washington, generally in non-certified seed stock. (Dana, Aug. 1)

POTATO MOSAIC

In addition to those quoted below, reports of mosaic have been received from Connecticut, New Jersey (on Green Mountain, and American Gient), South Carolina, Mississippi, Louisiana, and Iowa (on Bliss Triumph).

Kentucky: Diseases of the mosaic type were as prevalent as usual in the early crop potatoes. Success in control is being obtained through the use of heavily rogued full grown potatoes. (Valleau, August 1)

North Dakota: Much interest among growers has been shown in the mosaic disease. North Dakota has apparently never produced this disease with its characteristic symptoms of mottling of leaves, curling, etc. Symptoms are evidently masked, for indications are that mosaic occurs in seed produced in the state. When grown in the South, northern seed produces mosaic plants. Fields in North Dakota grown from seed which last year showed signs of the disease, but which produced typical mosaic in the South this spring, were recently visited. No indications of mosaic were found. (Weniger, August 1)

Nebraska: Mosaic and related diseases. Recent survey of about 2000 acres in western Nebraska, shows mosaic present in all fields from a trace to 50 percent. Average infection is about 5% (estimate). Owing to abnormal weather conditions, i. e. increased rainfall, lower temperatures and decreased sunlight, mosaic is appearing up to 10-15% in fields grown from seed stock in which no trace of the mosaic could be detected during the dry season last year. Mosaic is easier to detect in fields planted early. Aphids present in small numbers, hardly enough to account for spread of disease in field. (Goss, August 1)

Kansas: Mosaic appeared on a few plants in some fields. The symptoms were noticed early in the season during the cooler part of the growing period but disappeared later on as soon as the air temperature rose. This same phenomenon was observed last year both in the general field in the Kaw Valley and in an experimental field at Manhattan in which the stock planted was known to be carrying mosaic. These observations seem to indicate that mosaic symptoms are masked by high air temperatures. (White, July 15)

seem to indicate that mosaic symptoms are masked by high air temperatures. (White, July 15).

Arizona: Maricopa County: Probably present; identification not positive. (D. C. George, August 1)

Yavapai County: Over half of potato plants in county are diseased with mosaic according to Harold Brisley, who bases his statement on the opinion of pathologists who have visited the county. Loss is estimated at 25%. (Brown, Aug. 1)

Washington: These troubles are generally prevalent over the state and are responsible for deterioration in common seed stocks. Unselected or non-certified seed in general has a high percentage of these troubles. Certified seed stock, while not free from these diseases, is far superior to unselected seed in cropping possibilities. (Dana, August 1)

POTATO LATE BLIGHT REPORTED FROM NEW YORK

"Late blight has just been reported by E. E. Clayton on Long Island. It has not been observed in any up-state districts." (Chupp, August 1)

A FEW REPORTS OF RHIZOCTONIA OF POTATO

New Jersey: Scurf (Corticium vagum) was responsible for some poor stands in South Jersey, one field being observed with only a 25% stand. In Central Jersey while the disease did not affect germination greatly, the trouble was general, appearing as cankers on the stem. (Martin, August 1)

North Dakota: Infection is general over the state, some fields more severely affected than others. The effects of seed plot work, careful treating, and careful selection and roguing are being noticed this year, in that there is much less disease. (Weniger, August 1).

Nebraska: Rhizoctonia present on stems in large amounts in many fields. Apparently only slight damage to stand. (Goss, August 1)

Kansas: Very severe this year on untreated fields causing a reduction in yield of from 6 to 59 bushels per acre on seed treatment plots already dug. This is the most serious potato disease in Kansas by far. (White, July 15)

Washington: Very generally prevalent and responsible for considerable cutting off of shoots early in the season. Root and stem lesions hinder normal plant development to some extent. The moist season has favored the production of the Corticium stage. (Dana, August 1)

A SOFT ROT OF NEW POTATOES REPORTED FROM KENTUCKY

"Early crop potatoes are just being dug and shipped. In conversation with Mr. Hite of St. Mathews Produce Exchange near Louisville, he stated that losses from a stem end soft rot of early dug potatoes ran often 10 to 30% by the time the cars reached their destination (3 to 7 days from digging) and that an occasional car in this period was hauled to the dumps. Farmers stated that they have found spots in the field which, after a rain, produced 95% rotted tubers at digging time. Other parts of the same fields might show little or none. (Valleau, August 1)

SPINDLE TUBER (MARGINAL LEAF ROLL) OF POTATO

New York: Spindle tuber or marginal leaf roll has been found quite prevalent in many potato sections. No doubt it has often been mistaken for leaf roll or even mosaic in previous years. The Extension men are attempting to teach the growers to recognize it. (Chupp, August 1)

New Jersey: Spindle tuber. Common in plantings of the Irish Cobbler variety. 15% observed in some instances. (Martin, August 1)

Nebraska: Spindle tuber present in about the same amounts as mosaic - about 5%, western Nebraska. (Goss, August 1)

YELLOW DWARF OF POTATO CONTINUES SERIOUS IN NEW YORK

New York: Yellow dwarf is again prevalent, being often found in fields in the northeastern part of the state, or in fields planted with seed from this infested part of the state. Mr. Fenner reports one field where counts averaged 22%. (Chupp, August 1)

New Jersey: One plant found in Monmouth County; seed from New York. (Martin, August 1)

FERTILIZER INJURY TO POTATOES

New Jersey: Cases of fertilizer injury were observed in Central New Jersey. Marked differences were apparent in a fertilizer test conducted in co-operation with Soil Fertility investigations. In one of these tests, plots receiving a complete fertilizer in which all of the nitrogen was derived from inorganic materials were still green on July 27 while those receiving half of the nitrogen from organic sources were dead. In a triangle experiment the plots receiving increased amounts of nitrogen were still green while those receiving larger amounts of potash and phosphoric acid were dead. (Martin, August 1)

FUSARIUM WILT OF TOMATOES

North Carolina, South Carolina, Texas, and New Mexico report considerable amounts of Fusarium wilt of tomatoes this year. A few cases have been observed by collaborators in West Virginia, in the Ohio Valley section, and from New Jersey, R. F. Poole reports as follows:

"There is more wilt of tomatoes in this state this year than during any of the past four years. In other years wilt was prevalent in isolated areas and caused some loss, but was much less destructive than it is this year. It was found in all fields that were examined this year. The loss ranged from 1 to 5% of the Earliana variety in some fields of the southern counties, and from 90 to 100% of the Greater Baltimore variety was infected in one field."

TOMATO WILT CAUSING DAMAGE IN NEW JERSEY

"Mosaic has been observed on Acme, Earliana, Bonny Best, and Greater Baltimore tomato varieties. It was prevalent in many fields as early as July 1st at the time when the vines were very small. It was worse on light soils and high ground than on heavy moist soils. As high as eight consecutive diseased vines were counted in a single row of Greater Baltimore tomato vines, 15 to 35% in isolated areas, and 5 to 8% in several large fields."
(R. F. Poole, August 1)

DELAWARE REPORTS ON CANTALOUPE DISEASES

The following reports, dated August 8, have been received from J. F. Adams of Delaware. Collaborators are requested to watch for these various leaf diseases of cantaloupe and cucumbers and to send specimens and data to the Plant Disease Survey.

Leaf spots caused by various organisms:

"Leaf spots of cantaloupe have been very prevalent this season. Two spots not previously reported have been found this season. Cladosporium cucumerinum E.& A. on Hybrid No. 2, collected at Seaford, July 26, Septoria cucurbitacearum Sacc., collected at Delmar, July 20. Cercospora cucurbitae E. & E.more prevalent than last year, collected at Delmar, July 20. The leaf blight Macrosporium cucumerinum E. & E. is more prevalent than last year. It was collected at Seaford, July 26, on Eden Gem."

Downy mildew caused by Pseudoperonospora cubensis:

"Downy mildew was first observed in a field of Pearl Pink 7-31-23 An adjacent field of cucumbers showed heavy infection. Two isolated fields showed no trace of infection. The harvest of the crop is under way. The past week has been cool and wet and very favorable for spread of disease. Importance at this time cannot be estimated."

Mosaic:

"Very prevalent throughout state; appears to be common on all the commercial varieties; first observed at Seaford, June 20."

DOWNY MILDEW OF CUCUMBER

Delaware: Infection appeared 7-20-23 at Seaford. As observed the past three years the disease is of little commercial importance, since the crop is harvested before disease becomes destructive. It has been observed that cantaloupe fields nearest infected cucumbers show infection earlier than isolated fields. (Adams, Aug. 8)

South Carolina: Downy mildew was prevalent throughout the cucumber district this season, although it did not become serious until the major portion of the crop had been harvested. It was first noticed near Blackville on June 10, but the vines were not severely damaged until about June 20, at which time shipping had been suspended. Excellent results were obtained in control of this disease by the use of a 4-4-50 Bordeaux mixture. On fields where only two sprays were applied, heavy pickings were made on June 18, while the unsprayed sections of the same fields were all dead. (W. D. Moore, August 1)

CABBAGE YELLOWS

New Jersey: Severe in Camden and other southern counties. In some instances entire plantings were destroyed; found on Early Winningstadt. (Dept. Plant Path., July 1)

Texas: Quite prevalent, 5% loss. (Taubenhaus, June, 1923)

Kansas: Severe as usual in fields that have been in cabbage more than one year. On new fields or on fields that have not been in cabbage for five or six years, the disease is not as bad but yellows-free fields are difficult to find. Many fields, however, are making their heads this year in spite of the yellows and a very fair crop is being obtained. (White, July 15)

IMPORTANT NOTICE!

The Plant Disease Reporter is prepared three days before the first and fifteenth of each month, and it is important that collaborators and others submit their notes early enough to reach this Office by that time.

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